

## ABSTRACT OF THE DISCLOSURE

An integrated circuit includes M first terminals and N second terminals, where M and N are positive integers, and where  $M > N > 1$ . The circuit further includes a converter which receives M base-A-level input signals from the M first terminals, respectively, encodes each of  $A^M$  values represented by the M base-A-level input signals as a different base-K value represented by N base-K-level output signals, A and K are positive integers, and where  $K > A > 1$ . The converter then outputs the N base-K-level output signals to the N second terminals, respectively.